

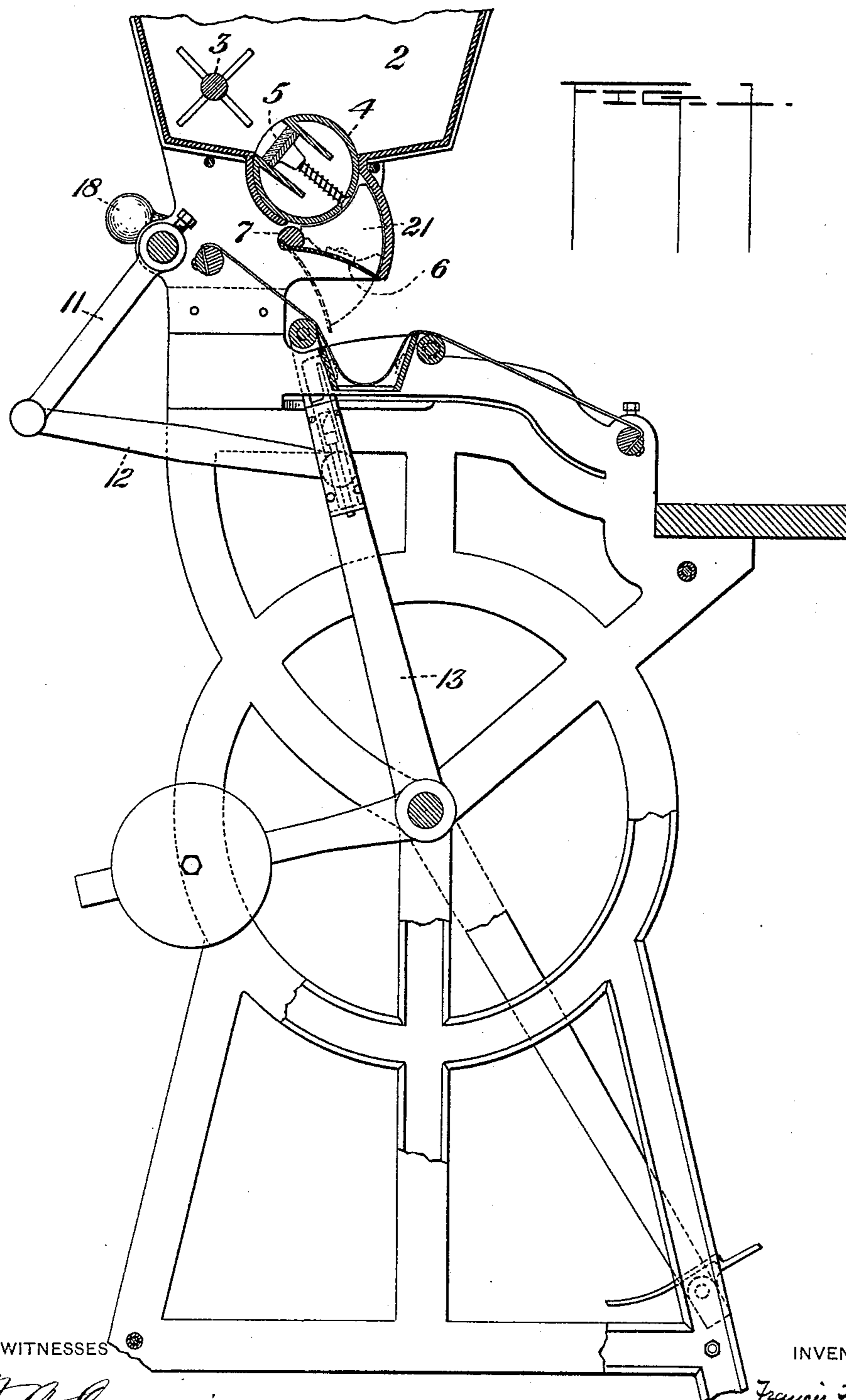
(No Model.)

2 Sheets—Sheet 1.

F. & E. H. THOMPSON.
CIGAR BUNCHING MACHINE.

No. 481,722.

Patented Aug. 30, 1892.



WITNESSES

N. B. Corwin
S. M. Corwin

INVENTORS

Francis Thompson
Edward H. Thompson
by W. Russell Lane
their Attorneys

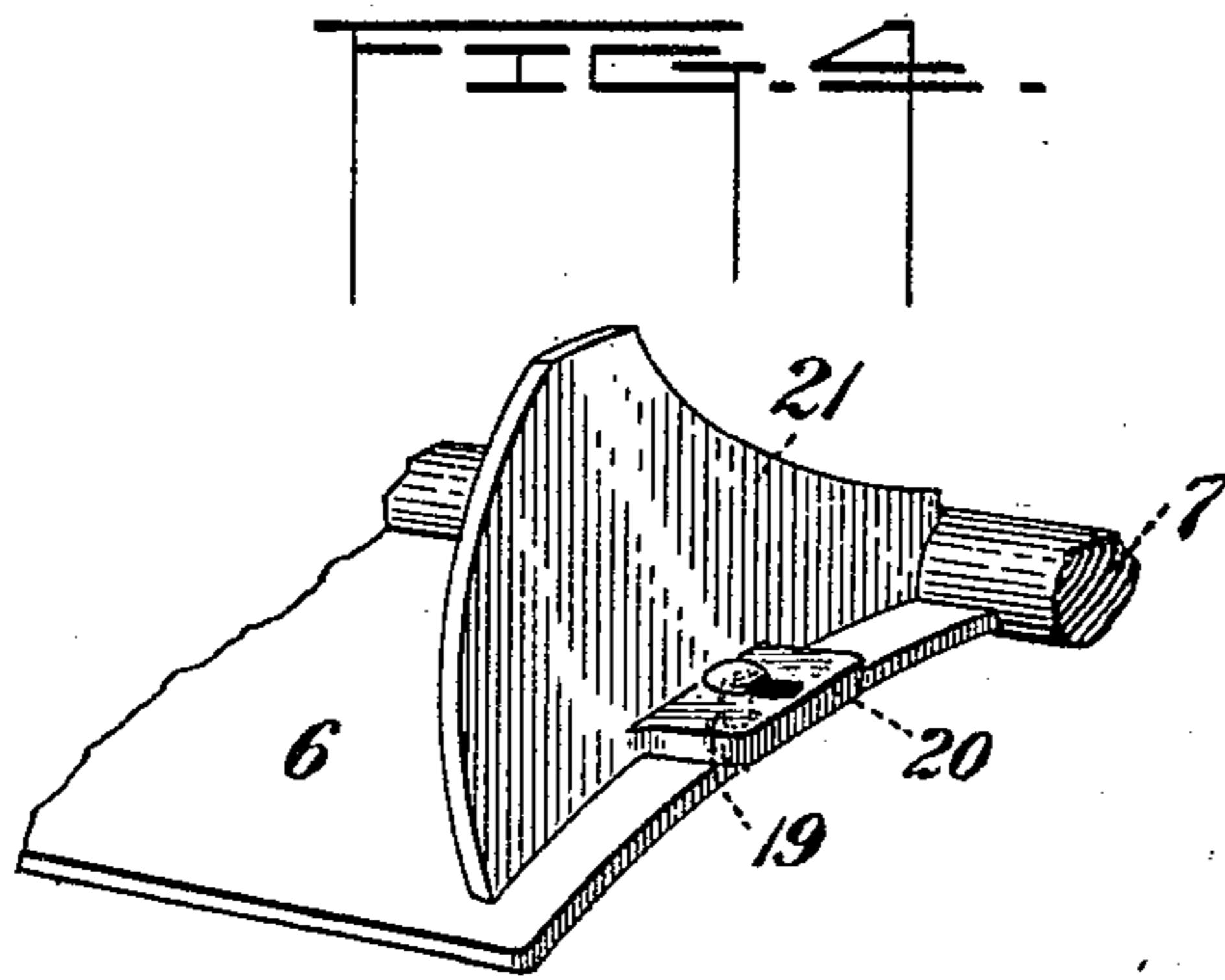
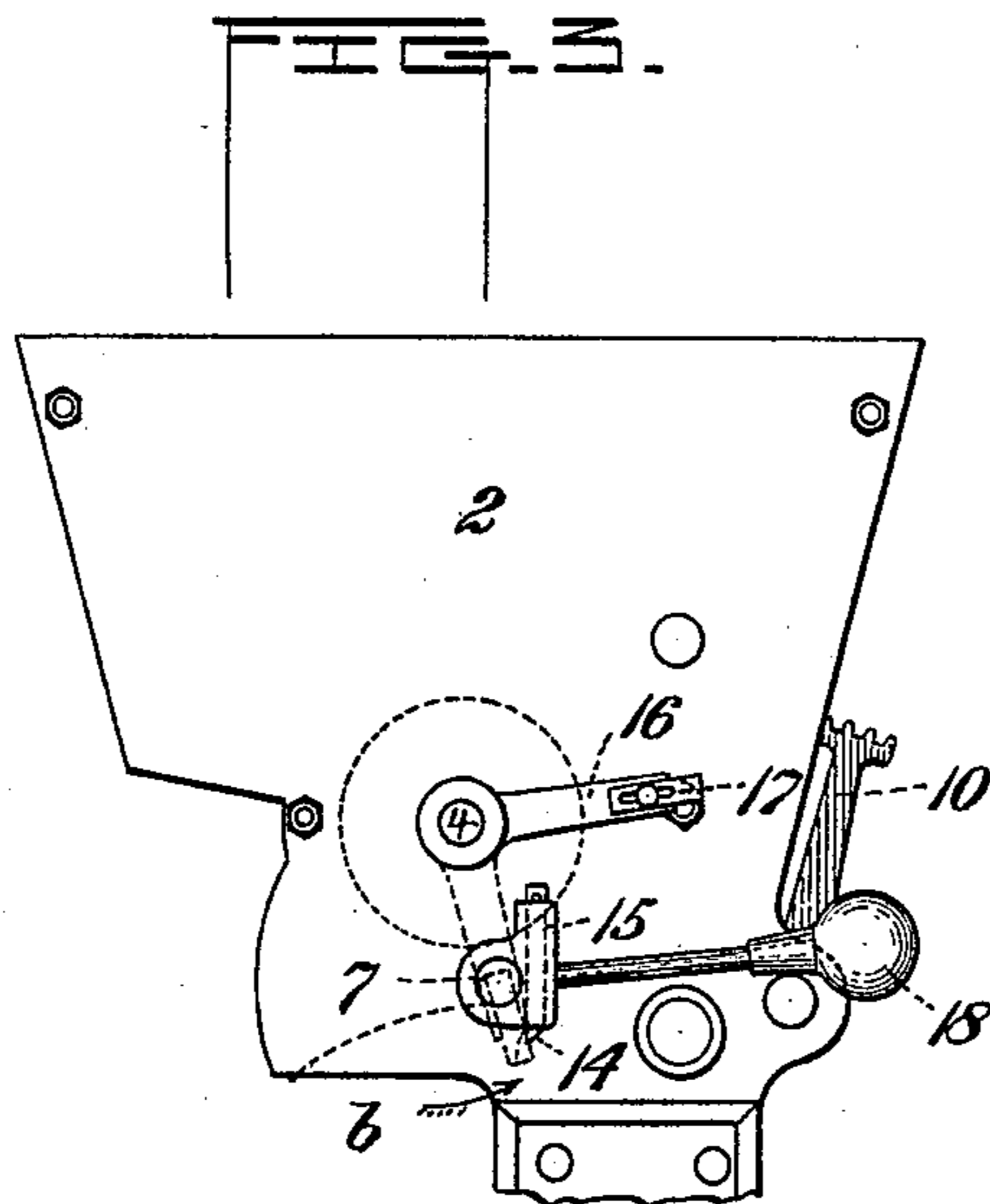
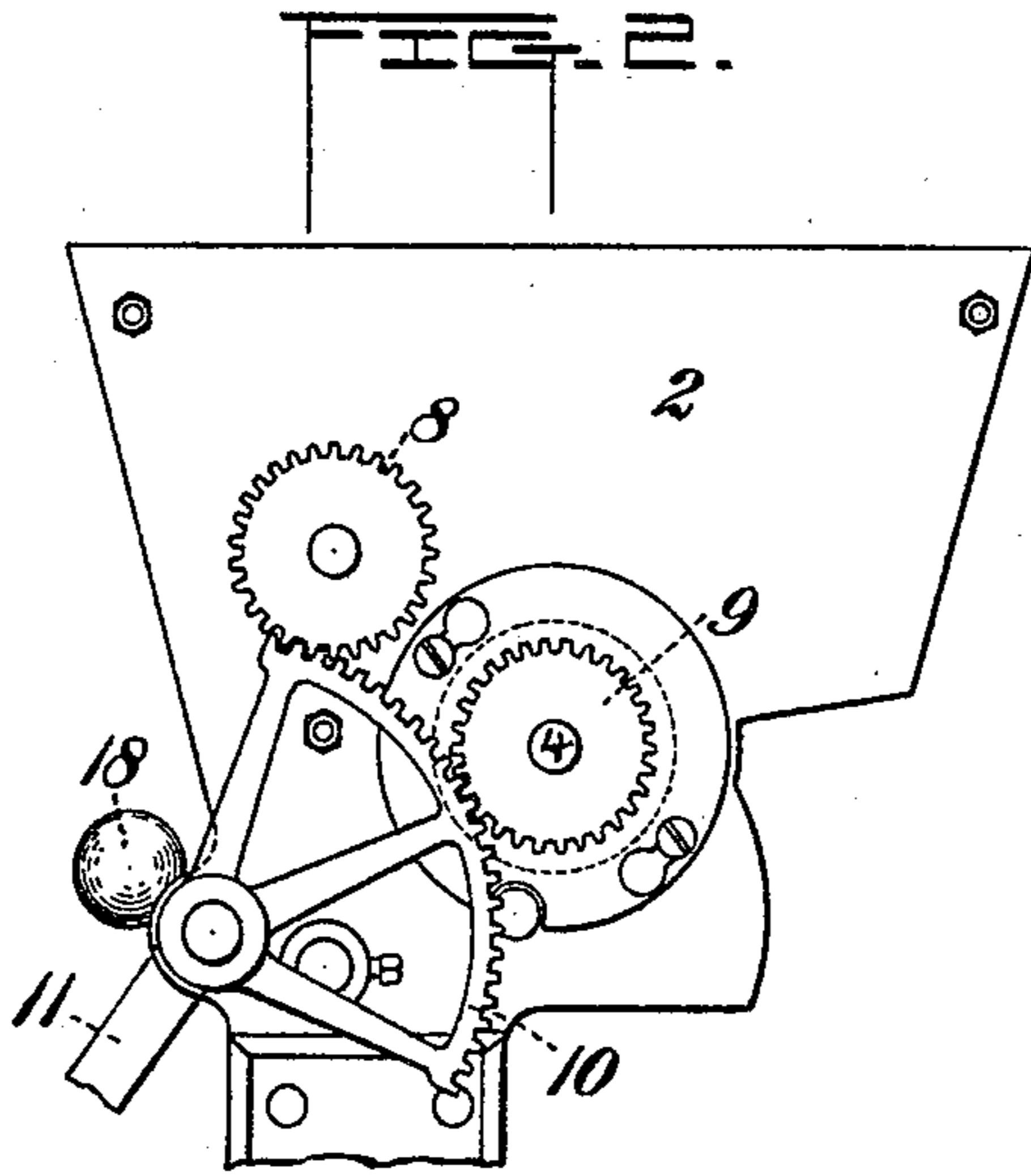
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by *W. B. Corwin & Sons*
their Attorneys.

UNITED STATES PATENT OFFICE.

FRANCIS THOMPSON AND EDWARD H. THOMPSON, OF ALLEGHENY,
PENNSYLVANIA.

CIGAR-BUNCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 481,722, dated August 30, 1892.

Original application filed June 30, 1890, Serial No. 356,414. Divided and this application filed April 23, 1891. Serial No. 390,104.
(No model.)

To all whom it may concern:

Be it known that we, FRANCIS THOMPSON and EDWARD H. THOMPSON, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cigar-Bunching Machines, of which the following is a full, clear, and exact description.

The device described and claimed in the present application is a divisional part of our application for a cigar-bunching machine, filed June 23, 1890, Serial No. 356,414, and patented September 8, 1891, No. 459,167.

As this application relates only to the tobacco-feeder, the description and drawings are limited to the parts of such feeder, together with the elements necessarily co-operating therewith.

In the drawings, Figure 1 is a vertical longitudinal section through our entire machine, showing the bunching belt and rollers. Fig. 2 is a side elevation of our improved feeder, the other portions of the machine being broken away. Fig. 3 is a similar elevation of the other side of the feeder, and Fig. 4 is a detail view hereinafter referred to.

Like symbols of reference indicate like parts in each.

In the drawings, 2 is the usual feed-hopper; 3, an agitating-shaft journaled therein; 4, a cylinder journaled at the delivery end of the hopper and provided with a pocket 5, which when the cylinder is in the position shown in Fig. 1 is adapted to receive a measured quantity of tobacco and which discharges the same when the cylinder is rotated about one hundred and eighty degrees of an arc. We prefer that the size of this pocket should be adjustable in the manner described and claimed in Patent No. 349,069, issued to us on September 14, 1886, and have so shown it in the drawings.

6 is a door pivoted at 7 below the cylinder 4 and adapted to receive on its upper surface the tobacco discharged by the latter, and adapted, also, when it is swung into the position shown by dotted lines in Fig. 1 to discharge the tobacco upon the belt below it. This door, as shown in Fig. 4, is provided with adjustable ends 21, which are fastened

to the door by bolts 19, passing through slotted flanges 20 thereon and fastened in the door. The width of the door may thus be regulated in accordance with the width of the belt used.

8 is a gear-wheel on the agitator-shaft, 9 a gear-wheel on the shaft of the cylinder 4, and 10 is a segmental pinion in gear with both gear-wheels 8 and 9.

11 is a crank-lever fixed to the shaft of the pinion 10, and 12 is a pitman connecting it with levers 13, so that when the latter levers are oscillated the lever 11 is rocked and an oscillatory rotation imparted to the gearing 10, 8, and 9 and to the agitator-shaft and feed-cylinder.

In order to operate the door 6 automatically, we provide its shaft 7 with a trigger 14, which is movably set in an upright position in a small case 15, so that its gravity shall tend normally to project it. A spring may, however, be employed to perform this work of projecting the trigger.

16 is a lever projecting radially from the shaft of the feed-cylinder and provided with a laterally-projecting stud 17, adapted in the motion of the lever to engage the trigger. This stud is preferably made to be longitudinally adjustable on the lever for a purpose hereinafter explained.

The operation is as follows: The parts being in the position shown in Fig. 1, as the levers 13 are moved forward to bunch the tobacco by means of the roller and belt the lever 16 moves in the direction of the arrow *b*, and by reason of the engagement of the stud 17 with the trigger 14 the door-shaft is rotated and the door is opened, so as to discharge upon the apron the tobacco previously discharged thereon from the hopper-cylinder. As the end of the trigger 14 and the stud 17 move in different arcs, their divergence soon disengages them from each other, and thereupon the door is automatically closed by a weight 18, suitably connected therewith. On the back motion of the levers 13 the lever 16 moves in the reverse direction to that above described, and when the stud 17 engages the trigger 14 the trigger is moved up to permit the passage of the lever and stud into the po-

sition shown by dotted lines in Fig. 3. By adjusting the stud 17 longitudinally on the lever the extent of opening of the door and the length of time which it is held open may be regulated. This manner of operating the tobacco-feeding mechanism we find to be of very great convenience and utility.

It is evident that the device may be applied not only to the machine of our patent above mentioned, but to a great variety of cigar-bunching machines, the pitman 12 being connected to a moving part of such machine.

The opening of the door by the direct action of a part of the feeding mechanism presents many advantages, since the revolving of the cylinder causes a positive movement of such door without any lost motion resulting from intermediate mechanism and allows their relative motions to be nicely adjusted.

We claim—

1. In a tobacco-feeder, the combination of a swinging door to receive and discharge the tobacco, a hopper containing a rotary feed-cylinder, and a lever upon the protruding end of the feed-cylinder shaft engaging a projection upon the shaft of said swinging door, substantially as and for the purposes described.

2. In a tobacco-feeder, the combination of a hopper, a rotary feed-cylinder located there-

in, a lever on the shaft of said feed-cylinder, a swinging door, and a movable trigger on the door-shaft, adapted to be operated by the projection, substantially as and for the purposes described.

3. In a tobacco-feeder, the combination of a hopper, a feed-cylinder located therein, a lever on the shaft of said feed-cylinder, a swinging door beneath the cylinder, and a movable trigger on the door-shaft, adapted to be moved by the lever on motion of the latter in one direction and to permit free passage of the same in its motion in the other direction, said lever having an adjustable engaging-stud, substantially as and for the purposes described.

4. In a tobacco-feeder, the combination, with the hopper and feeding mechanism, of a swinging door for receiving and discharging the tobacco from the feeding mechanism, said door having laterally-adjustable slotted end portions, substantially as and for the purposes described.

In testimony whereof we have hereunto set our hands this 25th day of March, A. D. 1891.

FRANCIS THOMPSON.
EDWARD H. THOMPSON.

Witnesses:

THOMAS W. BAKEWELL,
C. L. JACKSON.